ID Q81328 standard; cDNA; 7555 BP.
XX
AC Q81328;
XX
DT 05-AUG-1995 (first entry)
XX
DE Cardiac sodium channel protein coding sequence.
XX
KW Sodium channel protein; ds; therapeutic; diagnostic; prognostic;
KW antiarrythmic; cardiant; cardioglycoside; pRH3-1; pRH4-23; pRH14-31.
XX
OS Rattus rattus.
XX
FH Key Location/Qualifiers
FT CDS 196..6253
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PN US5380836-A.
XX
PD 10-JAN-1995.
XX
PF 13-FEB-1989; 89US-0331330.
XX
PR 13-FEB-1989; 89US-0331330.
PR 30-SEP-1991; 91US-0768107.
XX
PA (ARCH-) ARCH DEV CORP.
XX
PI Rogart RB;
XX
DR WPI; 95-060381/08.
DR P-PSDB; R67913.
XX
PT Purified DNA's encoding rat and human cardiac sodium channel
PT protein - useful for recombinant expression to produce sodium
PT channel proteins.
XX
PS Claim 8; Fig 1a-1n; 39pp; English.
XX
CC The cDNA is derived from 3 overlapping cDNA clones, designated
CC plasmid pRH3-1 (ATCC 67885), plasmid pRH4-23 (ATCC 67886) and
CC plasmid pRH14-31 (ATCC 67887). A virus/circular DNA plasmid vector
CC comprising the cDNA may be transformed or transfected into a
CC prokaryote/eukaryote host cell, and the resulting recombinant sodium
CC channel protein has various therapeutic, diagnostic and prognostic
CC uses. It may also be used to develop more effective antiarrythmic,
CC cardiant and cardioglycoside drugs.
XX
SQ Sequence 7555 BP; 1577 A; 2309 C; 2103 G; 1566 T; 0 other;

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ID V58419 standard; cDNA; 6556 BP.
XX
AC V58419;
XX
DT 01-DEC-1998 (first entry)
XX
DE PN4 sodium channel clone.
XX
KW Tetrodotoxin-sensitive sodium channel; rat; PN4 sodium channel; stroke;
KW nervous system disorder; epilepsy; brain injury; diabetic neuropathy;
KW AIDS-associated neuropathy; therapy; ss.
XX
OS Rattus sp.
XX
PN WO9838302-A2.
XX
PD 03-SEP-1998.
XX
PF 20-FEB-1998; 98WO-EP00997.
XX
PR 26-FEB-1997; 97US-0039447.
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PA (HOFF) HOFFMANN LA ROCHE & CO AG F.
XX
PI Delgado SG, Dietrich PS, Fish LM, Herman RC, Sangameswaran L;
XX
DR WPI; 98-481204/41.
XX
PT New rat tetrodotoxin-sensitive sodium channel alpha subunit and DNA
PT - for detecting inhibitors which alleviate pain, and treating
PT nervous system disorders, e.g. epilepsy, stroke, diabetic and AIDS
PT neuropathy
XX
PS Claim 1; Page 54-58; 87pp; English.
XX
CC This sequence represents the isolated rat PN4 sodium channel cDNA clone
CC of the invention. This sequence was isolated from a peripheral nerve from
CC a rat dorsal ganglia. The PN4 sodium channel sequences are
CC tetrodotoxin-sensitive sodium channels. The protein is used in assays for
CC detecting inhibitors of tetrodotoxin-sensitive sodium channels, which
CC alleviate pain. The probes can be used to detect and isolate the DNA or
CC protein in tissues. The antibodies can also be used to isolate the
CC protein. The protein is used as a therapeutic target for compounds to
CC treat disorders of the nervous system, such as epilepsy, stroke and brain
CC injury, diabetic neuropathy, and AIDS-associated neuropathy, etc.
XX
SQ Sequence 6556 BP; 1620 A; 1727 C; 1736 G; 1471 T; 2 other;

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ID Q05831 standard; cDNA; 7555 BP.
XX
AC Q05831;
XX
DT 10-JAN-1991 (first entry)
XX
DE Cardiac sodium channel gene.
XX
KW Rat; arrhythmia; ss.
XX
OS Rattus rattus.
XX
PN WO9009391-A.
XX
PD 23-AUG-1990.
XX
PF 09-FEB-1990; 90WO-US00768.
XX
PR 13-FEB-1989; 89US-0310330.
XX
PA (ARCH-) ARCH DEV CORP.
XX
PI Rogart RB;
XX
DR WPI; 90-275095/36.
DR P-PSDB; R06584.
XX
PT New rat cardiac sodium channel proteins - and associated DNA
PT sequences, polypeptides and peptides associated with
PT proteins, useful as antiarrythmic and cardiotonic drugs.
XX
PS Claim 7; Fig 1; 65pp; English.
XX
CC The sequence is derived from 3 overlapping clones, pRH3-1,pRH4-23,
CC and pRH14-31. (Deposited as ATCC 67885, 67886, and 67887 resp.)
CC The clones were isolated from a cDNA library in the lambda Zap
CC vector prepd. from mRNA obtd. from newborn rat hearts using rat
CC brain II cDNA probe. The isolated DNA can be used to screen a
CC similar human derived cardiac cDNA library for the corresponding
CC human gene. Proteins produced by expression of the DNA have
CC diagnostic therapeutic, and prognostic applications.
XX
SQ Sequence 7555 BP; 1576 A; 2314 C; 2101 G; 1564 T; 0 other;

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ID V09029 standard; DNA; 6048 BP.
XX
AC V09029;
XX
DT 06-JUL-1998 (first entry)
XX
DE Human hH1 sodium channel gene.
XX
KW Ion channel; sodium channel; hH1; human; cardiac cell; heart;
KW pacemaker; gene therapy; ds.
XX
OS Homo sapiens.
XX
PN WO9802040-A1.
XX
PD 22-JAN-1998.
XX
PF 04-APR-1997; 97WO-US05556.
XX
PR 17-JUL-1996; 96US-0682433.
XX
PA (MEDT) MEDTRONIC INC.
XX
PI Morissette J, Stokes KB;
XX
DR WPI; 98-110247/10.
DR P-PSDB; W23994.
XX
PT System for delivering genetic material to heart - comprises
PT reservoir, catheter and optionally pacing electrode for delivering
PT ion-channel protein, useful for, e.g. improving sensing by pacemaker
XX
PS Disclosure; Page 33-41; 73pp; English.
XX
CC This DNA sequence codes for the human hH1 voltage-regulated sodium
CC channel protein (see W23994). hH1 nucleic acids can be obtained
CC e.g. from an adult human cardiac cDNA library using probes
CC corresponding to the rat muscle TTX-I isoform, or by PCR
CC amplification of cDNA prepared from fresh cardiac tissue (see
CC V09030-31). A claimed system for delivering genetic material (GM)
CC comprises a reservoir containing GM and a device for delivering it
CC to myocardial cells (MC) at a specific location. The GM increases
CC the amplitude of the cardiac signal, improving the signal-to-noise
CC (S/N) ratio that is sensed by the electrode of a pacemaker. Also
CC claimed are: (1) an implantable delivery system comprising a
CC reservoir for GM which increases the expression of ion channels in
CC MC and system for delivering this through a catheter, the tip of
CC which engages MC at the chosen location, and (2) a system similar
CC to (1) comprising a pacing electrode on an inner wall of the heart,
CC close to the site where the GM is delivered. The system is used
CC for delivery of an ion-channel GM which causes depolarisation of
CC atrial and ventricular MC and improves the sensing of cardiac
CC signals by the pacemaker and the S/N ratio of atrial P-waves. The
CC preferred GM comprises DNA or RNA encoding hH1.
XX
SQ Sequence 6048 BP; 1307 A; 1855 C; 1609 G; 1277 T; 0 other;

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ID T77803 standard; cDNA; 6524 BP.
XX
AC T77803;
XX
DT 09-OCT-1997 (first entry)
XX
DE cDNA encoding wild type rat DRG (SNS-B).
XX
KW Rat; sensory neuron sodium channel protein; insensitive; tetrodotoxin;
KW modulator; impulse; sensory neuron; acute pain; chronic pain;
KW neuropathic pain; glia; muscle; parasympathetic nervous system;
KW enteric nervous system; central nervous system; dorsal root ganglia;
KW cranial ganglia; ss.
XX
OS Rattus rattus.
XX
FH Key Location/Qualifiers
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XX
PF 25-JUN-1996; 96WO-GB01523.
XX
PR 28-JUN-1995; 95GB-0013180.
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XX
PI Akopian AN, Wood JN;
XX
DR WPI; 97-100165/09.
DR P-PSDB; W21737.
XX
PT New isolated mammalian sensory neuron sodium channel protein - used
PT to identify modulators of the sodium channel, partic. for the
PT treatment of pain
XX
PS Claim 9; Page 50-58; 128pp; English.
XX
CC The sequences given in T77803-06 encode the wild type and three
CC variant forms of a rat sensory neuron sodium channel protein which
CC is insensitive to tetrodotoxin. The proteins can be used for
CC identifying modulators of the sodium channel. Blockers of the
CC sodium channel will block or prevent the transmission of impulses
CC along sensory neurons and thereby be useful in the treatment of acute,
CC chronic or neuropathic pain. The novel protein is found only in sensory
CC neurons and not in glia, muscle or the neurons of the (para)sympathetic,
CC enteric or central nervous system. The protein is found preferably in
CC the neurons of the dorsal root ganglia or cranial ganglia.
XX
SQ Sequence 6524 BP; 1540 A; 1866 C; 1662 G; 1456 T; 0 other;

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ID   T30192 standard; cDNA; 3033 BP.
XX
AC   T30192;
XX
DT   25-OCT-1996  (first entry)
XX
DE   Peripheral nervous system sodium channel peptide-1 alpha-subunit gene.
XX
KW   Rat; peripheral nervous system; sodium channel; PN1; PC12; PKI-4;
KW   sodium-agonist; sodium-antagonist; drug screening; analgesic;
KW   hypotensive; antiinflammatory; trauma; pain; neurological disorder;
KW   antisense; gene therapy; ss.
XX
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PA   (UYNY ) UNIV NEW YORK STATE RES FOUND.
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XX
DR   WPI; 96-251547/25.
DR   P-PSDB; R99638.
XX
PT   Nucleic acid encoding peripheral nervous system specific sodium
PT   channel peptide  - useful for sodium channel-associated disease or
PT   trauma.
XX
PS   Claim 2; Fig 7; 80pp; English.
XX
CC   The sequence encodes repeat domain-II of a rat peripheral nervous
CC   system sodium channel peptide-1 alpha-subunit (PN1), with sodium
CC   channel activity, and has been isolated from a rat PC12 subclone
CC   PKI-4 cell culture, expressing high levels of cAMP-dependent
CC   protein-kinase-inhibitor.  A cDNA library has been screened with
CC   primers T30196-97, and the product has been used as a probe to
CC   re-screen the library to isolate this sequence.  The full-length
CC   gene is given in T30193.  A probe derived from the sequence may be
CC   used in differential tissue expression studies.  The peptide may be
CC   used to isolate sodium-agonists and sodium-antagonists for use as
CC   analgesics, hypotensives, antiinflammatories, and in therapy of
CC   sodium channel-associated pathology or trauma, e.g. neurological
CC   disorders.  The DNA (in sense or antisense orientation) may be used
CC   in gene therapy.
XX
SQ   Sequence 3033 BP; 860 A; 689 C; 687 G; 797 T; 0 other;
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ID W57773 standard; Protein; 2104 AA.
XX
AC W57773;
XX
DT 27-OCT-1998 (first entry)
XX
DE Musca domestica voltage-sensitive sodium channel.
XX
KW voltage-sensitive sodium channel; insecticide; sensitivity;
KW resistance.
XX
OS Musca domestica.
XX
PN WO9828446-A1.
XX
PD 02-JUL-1998.
XX
PF 18-DEC-1997; 97WO-US24256.
XX
PR 24-DEC-1996; 96US-0772512.
XX
PA (CORR) CORNELL RES FOUND INC.
XX
PI Ingles PJ, Knipple DC, Soderlund DM;
XX
DR WPI; 98-377674/32.
DR N-PSDB; V40630.
XX
PT New isolated voltage-sensitive sodium channel polypeptides -
PT obtained from house flies, which are capable of conferring
PT sensitivity or resistance to an insecticide in insects
XX
PS Claim 63; Page 55-62; 96pp; English.
XX
CC The sequence is that of a voltage-sensitive sodium channel
CC (VSSC) of Musca domestica (kdr strain). Such a VSSC is capable of
CC conferring sensitivity or resistance to an insecticide. Antibodies
CC raised the VSSC can be used to detect VSSCs and these can be used in
CC drug screening. Antisense nucleic acids and vectors containing
CC the sequence may be used to reduce VSSc expression in an insect.
CC The VSSCs can be used for conferring sensitivity or resistance to
CC insecticides such as DDT and analogues and pyrethroids in insects
CC such as house flies, fruit or vinegar flies, tobacco budworm,
CC Colorado potato beetle, German cockroach or yellow fever mosquito.
XX
SQ Sequence 2104 AA;

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